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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/536,474	05/25/2005	Akira Ishibashi	114208-048	5171

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EVEREST INTELLECTUAL PROPERTY LAW GROUP
P. O. BOX 708
NORTHBROOK, IL 60065

EXAMINER	
RODRIGUEZ, RUTH C	

ART UNIT	PAPER NUMBER
3677	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/536,474	ISHIBASHI ET AL.	
	Examiner	Art Unit	
	Ruth C. Rodriguez	3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) ~~1-12~~ 13-25 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) ~~1-12~~ 13-25 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

GR 5/14/07

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 13-21, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document JP 2002-253607 A (JP '607) in view of Japanese Patent Document JP 2,238,707 A (JP '707) and Japanese Patent Document JP 2-226023 A (JP '023).

JP '607 discloses a fiber-made surface fastener (5) comprising joining faces in which a plurality of fiber-made engaging elements is provided on one surface of each flat base fabric (Figs. 1-14). The surface fastener comprises a mesh-type unit having an interval between warp threads of 0.7 to 0.3 mm, an interval between weft threads of 1.5 to 1.8 mm and a basis weight of 25.0 to 34.0 g/m2 are measured using a specific noise-measuring method (Paragraph 0040). The item having the least pleasant peel-off sound is utilized (Paragraph 0040). JP '607 fails to disclose that a ratio (A/B) of an area A of a range in which sound spectrum of a peeling-off sound Fourier-transformed in a range of 100 Hz to 15000 Hz is 100 Hz to 3000 Hz to an area B of a range in which sound spectrum of a peeling-off sound Fourier-transformed in a range of 100 Hz to

15000 Hz is 3000 Hz to 15000 Hz is 0.4 or more. However, JP '707(as described in the claims) and JP '023 (as described in the claims) teach observation of acoustic spectra on which Fournier transform has been performed as a method for measuring noise. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a ratio (A/B) of an area A of a range in which sound spectrum of a peeling-off sound Fourier-transformed in a range of 100 Hz to 15000 Hz is 100 Hz to 3000 Hz to an area B of a range in which sound spectrum of a peeling-off sound Fourier-transformed in a range of 100 Hz to 15000 Hz is 3000 Hz to 15000 Hz is 0.4 or more since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art especially in view of the teaching provided by JP '707 and JP '023 that serve to measure the noise. *In re Aller*, 105 USPQ 233.

JP '607 also discloses that:

- The base fabric of the surface fastener has a weaving/knitting structure, and in case of the knitting structure, when a wale density and a course density are assumed to be N1 (number of wales/cm) and N2 (number of courses/cm) respectively and in case of the weaving structure, densities of warp yams and weft yams are assumed to be N1 (number of warp yams/cm) and N2 (number of weft yams/cm) respectively, a following equation (1) is satisfied: $5.9 \leq N1+N2 \leq 29$.

- A sum of bending strength of base fabrics of male and female surface fastener members is 36 gf.crn/2.5 cm or less when each base fabric is bent at 180° in a

radius of 4.0 mm, and a joining face of at least one surface fastener member comprises a plurality of fiber-made engaging elements distributed uniformly on an entire surface.

- An apparent density of the base fabric of each of fiber-made surface fastener members which engage each other is 0.5 g/cm3 or less and a joining face of at least one surface fastener member is composed of a plurality of fiber-made engaging elements distributed uniformly on an entire surface.

- The base fabric of at least one of the fiber-made surface fastener members which engage each other has a multiple weaving/knitting structure produced by weaving or knitting in multiple layers via a binding yam while a gap is provided between the respective layers and the apparent density of the base fabric of a remaining one of the surface fastener members is 0.5 g/cm3 or less and the one fiber-made surface fastener member having the multiple weaving/knitting structure comprises one or more layers whose apparent density is 0.5 g/cm3 or less on a rear surface of a base layer from which the engaging elements are raised.

- The vibration attenuating means is one of various kinds of fabrics whose bending strength is 0.7.gf cm/2.5 cm or less when the fabric is bent at 180° in a radius of 4 mm.

- The vibration attenuating means is one of various kinds of fabrics whose apparent density is 0.5 g/cm3 or less.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have:

- A maximum component of sound spectrum of a peeling-off sound Fourier-transformed in a range of 100 Hz to 15000 Hz is a frequency lower than 3000 Hz.
- A ratio (A/B) of an area A of a range in which sound spectrum of a peeling-off sound Fourier-transformed in a range of 100 Hz to 15000 Hz is 100 Hz to 3000 Hz to an area B of a range in which sound spectrum of a peeling-off sound Fourier-transformed in a range of 100 Hz to 15000 Hz is 3000 Hz to 15000 Hz is 0.4 or more and a maximum component of sound spectrum of a peeling-off sound Fourier-transformed in a range of 100 Hz to 15000 Hz is a frequency lower than 3000 Hz.
- The ratio (A/B) of the area A of the range in which the sound spectrum of the peeling-off sound of the surface fastener Fourier-transformed in the range of 100 Hz to 15000 Hz is 100 Hz to 3000 Hz to the area B of the range in which the sound spectrum of the peeling-off sound of the surface fastener Fourier-transformed in the range of 100 Hz to 15000 Hz is 3000 Hz to 15000 Hz is 0.4 or more.

Since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art especially in view of the teaching provided by JP '707 and JP '023 that serve to measure the noise. *In re Aller*, 105 USPQ 233.

3. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP '607 in view of JP '707 and JP '023 as applied to claims 13-15 above, and further in view of Provost (US 4,884,323 A).

JP '607 fails to disclose that the surface fastener further comprises gap forming means for forming a gap between a rear face of a base fabric from which engaging

elements of the surface fastener is raised and an attachment object. However, Provost teaches a fiber-made surface fastener (10) comprising joining faces in which a plurality of fiber-made engaging elements are provided on one surface of each flat base fabric. The surface fastener further comprises gap forming means for forming a gap between a rear face of a base fabric from which engaging elements of the surface fastener is raised and an attachment object (Figs. 7-15). Therefore, it would have been obvious to one having ordinary skill in the art at the time of Applicant's invention to have gap forming means for forming a gap between a rear face of a base fabric from which engaging elements of the surface fastener is raised and an attachment object as taught by Provost in the surface fastener disclosed by JP '607 and modified by JP '707 and JP '023. Doing so, reduces the amount of noise-producing energy as taught by Provost.

4. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP '607 in view of JP '707 and JP '023 as applied to claims 13-15 above, and further in view of Japanese Patent Document 6-103 (JP 6-103).

JP '607 fails to disclose that the surface fastener further comprises vibration attenuating means provided between a rear face of a base fabric from which engaging elements of the surface fastener are raised and an attachment object. However, JP 6-103 teaches a fiber-made surface fastener comprising joining faces in which a plurality of fiber-made engaging elements are provided on one surface of each flat base fabric (Figs. 1-10). The surface fastener further comprising vibration attenuating means provided between a rear face of a base fabric from which engaging elements of the surface fastener are raised and an attachment object (Paragraph 0007). Therefore, it

would have been obvious to one having ordinary skill in the art at the time of Applicant's invention to have vibration attenuating means provided between a rear face of a base fabric from which engaging elements of the surface fastener are raised and an attachment object as taught by JP 6-103 in the surface fastener disclosed by JP '607 and modified by JP '707 and JP '023. Doing so, reduces the amount of noise-producing energy as taught by JP 6-103.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Smirlock et al. (US 4,776,068), Torigo et al. (US 5,611,122), Ohira et al. (US 6,635,327) and Murayama et al. (US 7,152,283) are cited to show state of the art with respect to fiber-made surfaces having a noise reduction feature.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth C Rodriguez whose telephone number is (571) 272-7070. The examiner can normally be reached on M-F 07:15 - 15:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on (571) 272-7075.

Submissions of your responses by facsimile transmission are encouraged. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Recognizing the fact that reducing cycle time in the processing and

examination of patent applications will effectively increase the patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as PTO's mailroom processing and delivery time. For a complete list of correspondence **not** permitted by facsimile transmission, see MPEP § 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee that the applicant is paying by check **should not be** submitted by facsimile transmission separately from the check.

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> (Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP § 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response has been transmitted by facsimile will cause further unnecessary

delays in the processing of your application, duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-6640.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ruth C. Rodriguez
Patent Examiner
Art Unit 3677

rcr
May 14, 2007

JJ Swann
Supervisory Patent Examiner
Technology Center 3600